

---

# A New Species of *Sinojackia* (Styracaceae) from Hubei, Central China

Yao Xiao-Hong,<sup>1</sup> Ye Qi-Gang,<sup>1</sup> Ge Ji-Wen,<sup>2</sup> Kang Ming,<sup>1</sup> and Huang Hong-wen<sup>1,\*</sup>

<sup>1</sup>Wuhan Botanical Garden, Chinese Academy of Sciences, Wuhan 430074, People's Republic of China.

\*Corresponding author: hongwen@wbgcas.cn

<sup>2</sup>Faculty of Life Sciences and Technology, School of Environmental Studies, China University of Geosciences, Wuhan 430074, People's Republic of China

---

**ABSTRACT.** *Sinojackia huangmeiensis* J. W. Ge & X. H. Yao, a new species of *Sinojackia* Hu from Hubei Province, central China, is described and illustrated. It is similar to *S. xylocarpa* Hu. The new species differs from *S. xylocarpa*, however, in its smaller flowers with broadly ovate petals and smaller fruit bearing a papillate short beak.

**Key words:** China, *Sinojackia*, Styracaceae.

*Sinojackia* Hu is a Chinese endemic genus of only seven species (including the new one described here). The first report of this genus was based on a specimen from Jiangsu Province, in eastern China, which was recognized as *S. xylocarpa* Hu (Hu, 1929). Since then, Hu (1930) described *S. rehderiana* Hu from Jiangxi, and Merrill (1937) transferred *Pterostyrax henryi* Dummer to *S. henryi* (Dummer) Merrill. Subsequently, Luo (1992) described *S. sarcocarpa* L. Q. Luo from Sichuan, and Chen discovered *S. microcarpa* C. T. Chen & G. Y. Li and *S. oblongicarpa* C. T. Chen & T. R. Cao from Zhejiang and Hunan, respectively (Chen & Li, 1997; Chen, 1998). *Sinojackia oblongicarpa* has also been treated as a synonym of *S. sarcocarpa* (Luo, 2005). During recent field surveys on the Longgan Lake Wetland Reserve located at the boundary between Hubei and Anhui Province, a new species of *Sinojackia* exhibiting distinctive morphological characters differing from other species of this genus was discovered.

***Sinojackia huangmeiensis*** J. W. Ge & X. H. Yao, sp. nov. TYPE: China, Hubei: Huangmei County, Xiaxin, Qianlin, bushes by Longgan lake, 30 m, ca. 29°59'N, 116°01'E, 16 Apr. 2005, X. H. Yao & C. T. Chen 05003 (holotype, PE; isotype, HIB). Figure 1.

Haec species *Sinojackiae xylocarpae* affinis, sed floribus minoribus, petalis late-ovatis 10–12 × 9–10 mm, et fructibus minoribus, cum rostro papillato brevi 16–18 mm longo, 9–12 mm diam. differt.

Trees deciduous, to 3–4 m tall; trunk thorny, to 10 cm DBH; bark vertically fissured and peeling;

branches grayish brown; current year's shoots green, densely stellate-pubescent, second year's branches blackish brown, glabrous, longitudinally striate; winter buds naked, with densely dark brown stellate trichomes. Leaves simple, alternate, papery; petiole 2–3 mm; leaves at base of the flowering branch with blade ovate, other leaves with blade widely ovate to narrowly ovate, all leaves 5–12 × 2–6 cm; apex acuminate, margin serrate, secondary veins 8 to 10 per side; leaves sparsely stellate-pubescent abaxially and along veins adaxially, glabrescent. Inflorescences racemose, 4- to 6-flowered; pedicel 2–2.5 cm; sparsely stellate-puberulent, pendulous; calyx (5)6(7)-dentate; teeth triangular, 1–1.2 × 0.9–1.2 mm at base, densely stellate-pubescent; corolla white, deeply 5- to 7-parted; lobes imbricate, broadly ovate, 10–12 × 9–10 mm, apex slightly cuspidate; stamens 10 to 12, inserted at base of corolla, longer than corolla lobes; filaments erect, ca. 3.5–4 mm, sparsely stellate-pubescent; anthers oblong, connective shortly developed; ovary inferior, 3-locular, with 6 to 8 ovules per locule in 2 rows; placentation axile; style filiform, subulate, ca. 7–8 mm; stigma usually obscurely 3-lobed. Fruit ovoid including a short and papillate beak, grayish brown, 16–18 × 9–12 mm diam.; beak 3–4 mm; exocarp ca. 1 mm thick, densely lenticellate; mesocarp spongy, ca. 4 mm thick; endocarp woody; seeds 1 to 2; seed coat smooth; endosperm fleshy.

**Phenology.** Flowering March through April; fruit ripening October through November.

**Distribution and habitat.** Only known from its type locality in Hubei, the new species grows on a hillside near Longgan lake together with *Quercus serrata* Thunberg var. *trivipetiolata* Nakai, *Ilex cornuta* Lindley & Paxton, *Cephalotaxus fortunei* Hooker, *Liquidambar formosana* Hance, and *Symplocos paniculata* (Thunberg) Miquel. This habitat differs from that of other *Sinojackia*, which favor riparian habitats.

**Conservation status.** *Sinojackia huangmeiensis* is endemic to China and known only from a single



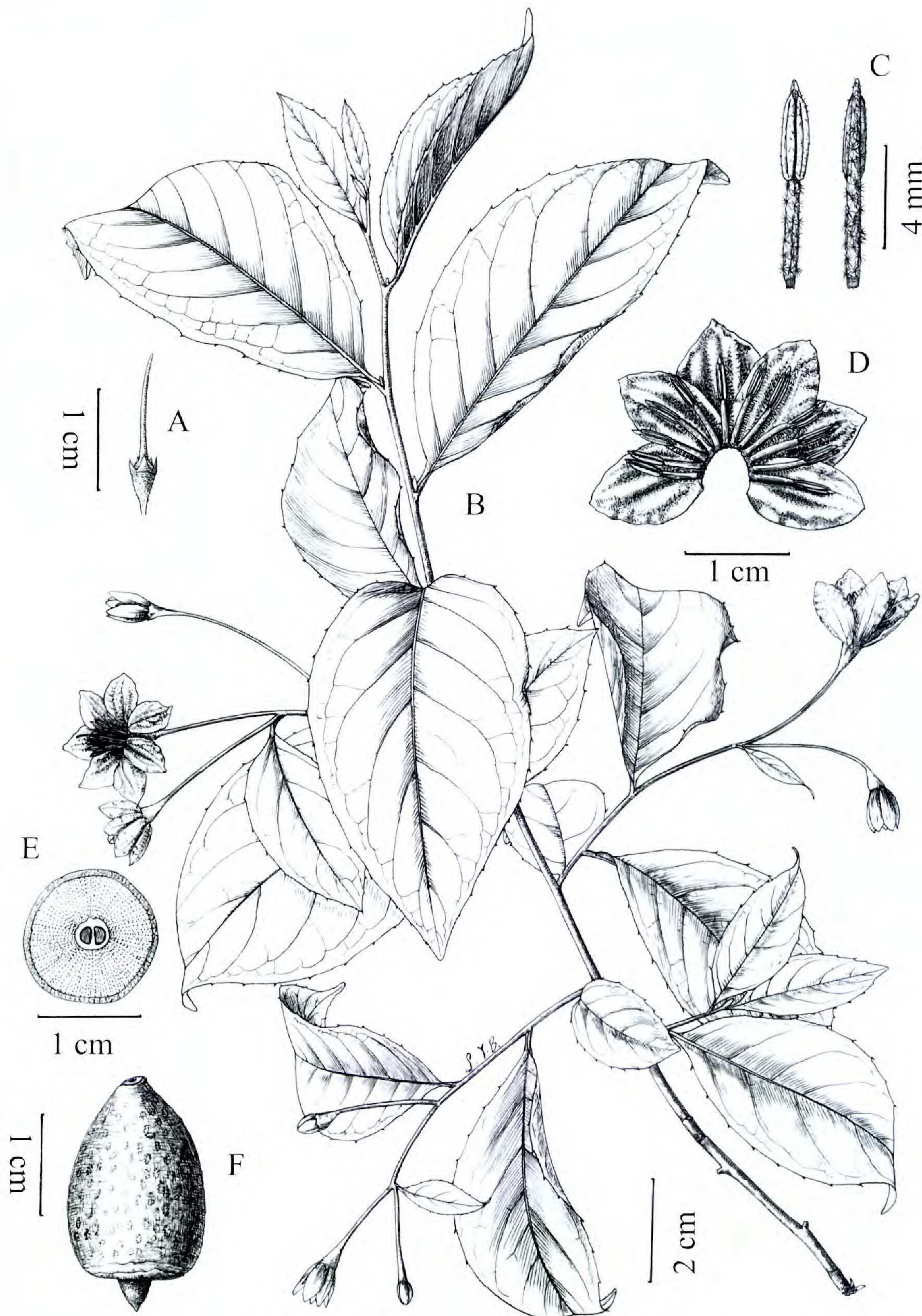


Figure 1. *Sinojackia huangmeiensis* J. W. Ge & X. H. Yao. —A. Pistil. —B. Habit. —C. Stamens. —D. Opened calyx showing androecium. —E. Cross section of fruit. —F. Fruit. Drawn from the holotype X. H. Yao & C. T. Chen 05003 (PE).

population of about 200 individuals (including young trees). A conservation strategy should be urgently carried out to conserve this rare, or probably endangered species, although extensive field survey for additional populations of the genus is needed to clarify the taxonomic and conservation status of the whole genus.

*Sinojackia huangmeiensis* is similar to *S. xylocarpa* but differs from it by its smaller flowers (10–12 × 9–10 mm) with broadly ovate petals, while *S.*

*xylocarpa* has larger flowers (12–13 × 8–10 mm) with oblong-elliptic corolla lobes, as well as by its smaller grayish brown fruits (16–18 × 9–12 mm) with a papillate short beak, while *S. xylocarpa* has larger rufous fruits (20–25 × 20–24 mm) with a long and conical beak.

*Paratypes.* CHINA. **Hubei:** Huangmei County, bushes by Longgan lake, alt. 30 m, 18 Aug. 2001, J. W. Ge 200101 (CUG); alt. 30 m, 25 May 2004, X. H. Yao 04004 (HIB).



KEY TO THE SPECIES OF *SINOJACKIA*

- 1a. Fruits glabrous.  
 2a. Fruits crimped after drying . . . . . *S. sarcocarpa*  
 2b. Fruits plump after drying.  
 3a. Fruits 6- to 12-ribbed when dry; mesocarps undeveloped . . . . . *S. microcarpa*  
 3b. Fruits unribbed when dry; mesocarps developed.  
 4a. Fruits with a papillate short beak; petals broadly ovate . . . *S. huangmeiensis*  
 4b. Fruits with a long and conical or acuminate apical beak; petals oblong-elliptic.  
 5a. Fruits ovoid with a conical apical beak, 20–25 × 20–24 mm . . . . . *S. xylocarpa*  
 5b. Fruits ellipsoid with an acuminate apical beak, 20–25 × 10–12 mm . . . . . *S. rehderiana*  
 1b. Fruits stellate hairy . . . . . *S. henryi*

*Acknowledgments.* The authors are grateful to Chen Tao, Peter W. Fritsch, Kingsley Dixon, and an anonymous reviewer for their critical comments on the manuscript, and to Sun Ying-Bao for his fine illustration of *Sinojackia huangmeiensis*. We also acknowledge Qi Cheng-Jing, Li Xiao-Dong, and Li

Xin-Wei for their enthusiastic help and encouragement. The work was supported in part by the Natural Scientific Foundation of China (30370153) and the Key Project of the Chinese Academy of Sciences (KSCX2-SW-104) and WZ No. 050809 of the Conservation Genetics Laboratory, Wuhan Botanical Garden, Chinese Academy of Sciences.

## Literature Cited

- Chen, C. T. 1995. *Changiostyrax*, a new genus of Styracaceae from China. *Guihaia* 15: 289–292.  
 ———. 1998. A new species of *Sinojackia* Hu (Styracaceae) from Hunan, south China. *Edinburgh J. Bot.* 55: 235–238.  
 ——— & G. Y. Li. 1997. A new species of *Sinojackia* Hu (Styracaceae) from Zhejiang, east China. *Novon* 7: 350–352.  
 Hu, H. H. 1928. *Sinojackia*, a new genus of Styracaceae from southeastern China. *Contr. Biol. Lab. Sci. Soc. China* 4: 1–4.  
 ———. 1930. *Notulae systematicae ad floram sinensem*, II. *J. Arnold Arbor.* 11: 224–228.  
 Luo, L. Q. 1992. A new species of *Sinojackia* from Sichuan. *Acta Sci. Nat. Univ. Sunyatsenia* 31: 78–79.  
 ———. 2005. A new synonym in the genus *Sinojackia* (Styracaceae). *Acta Phytotax. Sin.* 43: 561–564.  
 Merrill, E. D. 1937. *Miscellanea sinensia*. *Sunyatsenia* 3: 246–262.